IL920020007US1

REMARKS

Claims 2 – 9, 11 – 18 and 22 – 35 are pending. Claims 2 – 3, 5 – 6, 15 – 18, and 31 – 35 have been amended, and support for the amendments can be found in Figs. 3 and on pages 15 – 20 of the present invention. No new matter has been added. Reconsideration is requested.

Claims 6 – 9 and 11– 14 were rejected under 35 U.S.C. 102(e) as being anticipated by Chang et al. (Pub. No. 2002/010463) Applicant is filing herewith a declaration under 37 CFR 1.131 stating that the invention of the present application had been reduced to practice prior to the filing date of Chang et al., January 24, 2001. In view of this declaration, applicant respectfully believes that the rejections of claims 6 – 9 and 11 – 14 are moot.

Claims 2 – 7, 15 – 18, 22 – 25 and 28 – 35 were rejected under 35 U.S.C. 102(e) as being anticipated by Dangelo et al. (US. Patent 5, 555,201). The applicant respectfully traverses the examiner's rejection and states that Dangelo et al. does not even begin to address or teach "designing one or more transmission line topologies", as cited in currently amended independent claims 2, 6, 15, and 17, 31 – 35. Even more so, in 1994 Dangelo et al. is not even aware of "transmission line topologies".

The need to consider transmission line design was not needed in 1994, and thus Dangelo et al. does not address it. This is due to the fact that the most advanced system in 1994, (http://www.ox.compsoc.net/~swhite/history/timeline.html), the Intel Pentium Processor, ran at a frequency of 100 MHz. Interconnects design, on the level of transmission lines, becomes desirable only roughly above 1[GHz] (achieved in 2000) and is only critical for the operation of systems of over 5 GHz (achieved by IBM just of late).

In 1994, at frequencies of 100 MHz, it was sufficient to consider the interconnect impact as wire delays/wire loading only. Dangelo et al. does not discuss, suggest, and is not even aware of transmission line topologies as shown by the present invention in Figs. 3, described on pages 13 – 17, and claimed in claims 2 – 7, 15 – 18, 22 – 25 and 28 – 35. As such, it Dangelo et al. is undoubtedly unaware of the need to design transmission line topologies.

In Dangelo et al. the wiring effect on the simulated design performance is either overlooked or is treated only in the level of a post-layout estimation of wire delays/wire loading. This is emphasized by the fact that wire delays/wire loading is

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an optional step described in steps 16 and 17 (column 20, lines 10 – 14 and 18 – 26), Fig. 5 and item 712 of figure 7 (column 22, lines 38 – 38). Dangelo et al. further discusses wire delays in items 808 and 812 of Fig. 8 (column 23, lines 23 – 42 and 52 – 61). Dangelo et al. describes very rough and approximate wiring effects considerations sufficient for 1994, but it does not discuss, and is not even aware of, the need to address critical on-chip interconnects using transmission line topologies. Thus Dangelo et al. does not suggest or teach the "designing one or more transmission line topologies"; it has no incentive to.
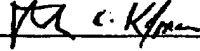
Claims 26 and 27 were rejected under 35 U.S.C. 103(a) as being unpatentable over Dangelo in view of Chang. In view of the declaration filed under 37 CFR 1.131, applicants respectfully believe that these rejections are moot as well.

Applicants believe that the above amendments and remarks are fully responsive to all the objections and grounds of rejections by the examiner. In view of the foregoing amendments and remarks, the applicants respectfully submit that all the pending claims are deemed to be allowable. Their favorable reconsideration and allowance is respectfully requested.

Should the Examiner have any question or comment as to the form, content or entry of this Amendment, the Examiner is requested to contact the undersigned at the telephone number below. Similarly, if there are any further issues yet to be resolved to advance the prosecution of this application to issue, the Examiner is requested to telephone the undersigned counsel.

Please charge any fee associated with this paper to deposit account No. 09-0468.

Respectfully submitted,

By: _____

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